

### REMARKS

Applicant notes with appreciation that the Office Action at page 7 indicates that claim 12 would be allowable if rewritten in independent form. Independent claim 8, on which allowable claim 12 and intervening claim 11 depend, is amended to clarify certain antecedent-related issues. Specifically, claim 8 is amended to replace “a first magnitude value” with “an average magnitude value,” and to replace “a second reference magnitude value” with “a reference magnitude value.” In addition, allowable claim 12 and intervening claim 11 are amended to refer to an “initialization signal” instead of “signals.” Accordingly, claim 17 includes the limitations of former claim 12, amended to include the stated clarifying amendments, and rewritten in independent form. Entry and allowance of new claim 17, and claims 18-23 dependent thereon, are respectfully requested.

Claims 9-16 are objected to for informalities stated in the Office Action at page 2. Claims 9-16 are amended above in a manner that is believed to correct the informalities. Reconsideration and removal of the objections are respectfully requested.

Claims 1-10 and 13-16 are rejected as being unpatentable over Guillaud, *et al.* (United States Patent Number 5,594,760 – hereinafter “Guillaud”) in view of Tzannes, *et al.* (United States (U.S.) Publication Number 2006/0233227 – hereinafter “Tzannes”). Claim 11 is rejected as being unpatentable over Guillaud, *et al.* and Tzannes, *et al.*, and further in view of Cioffi, *et al.* (United States (U.S.) Publication Number 2002/0131455 – hereinafter “Cioffi”). In view of the amendments to the claims and the following remarks, it is believed that claims 1-11 and 13-16 are allowable over the cited references. Reconsideration of the rejections is therefore respectfully requested.

Applicant notes that Tzannes (U.S. Publication Number 2006/0233227) is not applicable as a prior art reference under 35 U.S.C. 103(a)/102, since the U.S. filing date of Tzannes is June 28, 2006 and since the present application was filed in the United States on December 1, 2003, claiming priority under 35 U.S.C. 119 to Korean application 10-2002-0086873, filed December

20, 2003. However, Applicant further notes that Tzannes (U.S. Publication Number 2006/0233227) is a continuing application of Tzannes, *et al.* (United States Patent Number 6,556,623 – hereinafter “Tzannes ‘623”), which has an effective U.S. filing date of June 8, 2001. For purposes of further discussion, it will be assumed that Tzannes ‘623 is applied against the claims of the present application.

Independent claim 1 is amended herein to clarify that a “method for controlling receipt gain in a digital communication system including a transmitter and a receiver for communicating data on a telephone line” comprises “adjusting at least one of a maximum magnitude value and a minimum magnitude value” of a “receipt signal” when an average magnitude value” of an “initialization signal” is “different than” a “reference magnitude value.” In addition, claim 1 is amended herein to clarify that the method comprises “controlling the receipt gain such that the receipt signal is between the maximum magnitude value and minimum magnitude value of the receipt signal according to the difference between the average magnitude value of the received initialization signal and the reference magnitude value.”

Independent claim 8 is amended herein to clarify that a “digital communication system for communicating using a telephone line” comprises a “receiver” including an “amplifier for amplifying” a “receipt signal” and an “initialization signal” received through a “hybrid circuit,” wherein the “receiver” “controls gain” of an “amplifier according to a difference between an average magnitude value of an initialization signal” received through a “hybrid circuit at the receiver during a time period” and a “reference magnitude value,” and “adjusts at least one of a maximum magnitude value and a minimum magnitude value of the receipt signal when the average magnitude value of the initialization signal is different than the reference magnitude value.”

It is submitted that the combination of Guillaud and Tzannes fails to teach or suggest “adjusting at least one of a maximum magnitude value and a minimum magnitude value of a receipt signal” when an “average magnitude value” of an “initialization signal” is “different than” a “reference magnitude value,” as claimed in amended independent claim 1, and fails to teach or suggest a “receiver” of a “digital communication system” that “adjusts at least one of a maximum magnitude value and a minimum magnitude value of a receipt signal when the average

magnitude value of the initialization signal is different than the reference magnitude value,” as claimed in amended independent claim 8.

Guillaud discloses an automatic gain control circuit that includes an amplifier means 10 and a means 12 that measures power of a signal IF3 and produces a control signal CT which influences the amplifier means 10, the means 12 forming a detector AGC DET for the automatic gain control loop (see Guillaud, FIG. 2 and column 2, line 62 through column 3, line 67). Means 12 of Guillaud further comprises a means 24 that compares a mean measured power P with a window of permitted reference power values lying between a maximum value Pmax and a minimum value Pmin (see Guillaud, FIG. 3 and column 3, lines 5-12). However, there is no teaching or suggestion in Guillaud of “adjusting at least one of” the maximum value Pmax and the minimum value Pmin when the “average magnitude value” of a “received initialization value” is “different than” a “reference magnitude value,” as claimed in amended independent claims 1 and 8.

In addition, Guillaud fails to teach or suggest an “initialization signal” that is received through a “hybrid circuit,” as claimed in amended independent claims 1 and 8. Since Guillaud fails to teach or suggest an “initialization signal,” as claimed in claims 1 and 8, it follows that Guillaud fails to teach or suggest an “average magnitude value of the initialization signal” that is compared to a “reference magnitude value,” as claimed in claim 1. Specifically, there is no teaching or suggestion of the mean measured power P of Guillaud being an “average magnitude value of the initialization signal” that is compared to a “reference magnitude value,” as claimed in claim 1.

Guillaud produces an initialization signal INI which is used to enforce a reference power Pd, the reference power Pd lying between the maximum value Pmax and minimum value Pmin (see Guillaud, column 3, lines 37-44). The initialization signal INI of Guillaud is used to load the reference power value Pd in a recursive filter means 2 when the measured power P lies outside the window Pmin – Pmax (see Guillaud, column 3, lines 46-54). However, the initialization signal INI of Guillaud is different than the “initialization signal,” as claimed in claim 1 because the initialization signal INI of Guillaud is generated as a result of a comparison between the measured power P and minimum value Pmin or maximum value Pmax (see

Guillaud, column 3, lines 5-12), whereas, in claims 1 and 8 of the present invention, an “average magnitude value of the initialization signal received during the time period” is compared to a “reference magnitude value.”

Therefore, since Guillaud fails to teach or suggest an “average magnitude value of the initialization signal” that is compared to a “reference magnitude value,” as claimed in claims 1 and 8, and since the maximum value  $P_{max}$  and minimum value  $P_{min}$  of Guillaud are not a “maximum magnitude value” and a “minimum magnitude value” of a “receipt signal,” as claimed in claims 1 and 8, it further follows that Guillaud fails to teach or suggest “adjusting at least one of a maximum magnitude value and a minimum magnitude value of a receipt signal” when the “average magnitude value of the initialization signal is different than the reference magnitude value,” as claimed in claims 1 and 8. Instead, in Guillaud, a control signal MOD is used to select the size of the abovementioned window of permitted reference power values lying between a maximum value  $P_{max}$  and a minimum value  $P_{min}$  (see Guillaud, column 3, lines 57-58).

With regard to Tzannes, Tzannes likewise fails to teach or suggest “adjusting at least one of a maximum magnitude value and a minimum magnitude value of a receipt signal” when an “average magnitude value” of an “initialization signal” is “different than” a “reference magnitude value,” as claimed in amended independent claim 1, and fails to teach or suggest a “receiver” of a “digital communication system” that “adjusts at least one of a maximum magnitude value and a minimum magnitude value of a receipt signal when the average magnitude value of the initialization signal is different than the reference magnitude value,” as claimed in amended independent claim 8. Tzannes teaches a training or initialization signal that is used during a training state prior to transmitting information during an operation of a multi-carrier transceiver (see Tzannes, page 1, paragraph [0010]). However, there is no teaching or suggestion in Tzannes that when an “average magnitude value” of the training or initialization signal of Tzannes is different than a “reference magnitude value,” at least one of a “maximum magnitude value and a minimum magnitude value of a receipt signal” is adjusted, as claimed in claims 1 and 8.

In view of the above, it is submitted that Guillaud and Tzannes, alone or in combination, fail to teach or suggest the invention set forth in amended independent claims 1 and 8. Reconsideration of the rejections and allowance of independent claims 1 and 8 and the various claims dependent thereon over Guillaud and Tzannes are therefore respectfully requested.

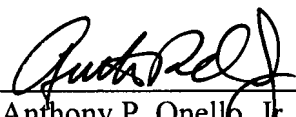
With regard to the rejection of claim 11 based on the combination of Guillaud, Tzannes, and Cioffi, it is submitted that Cioffi, like Guillaud and Tzannes, fails to teach or suggest a "receiver" of a "digital communication system" that "adjusts at least one of a maximum magnitude value and a minimum magnitude value of a receipt signal when the average magnitude value of the initialization signal is different than the reference magnitude value," as claimed in amended independent claim 8.

Since the combination of Guillaud, Tzannes, and Cioffi fails to teach or suggest the invention set forth in the amended claims, the claims are believed to be allowable over the cited references. Accordingly, reconsideration and removal of the rejection of claim 11 under 35 U.S.C. 103(a) based on the combination of Guillaud, Tzannes, and Cioffi are respectfully requested.

In view of the amendments to the claims and the foregoing remarks, it is believed that all claims pending in the application are in condition for allowance, and such allowance is respectfully solicited. If a telephone conference will expedite prosecution of the application, the Examiner is invited to telephone the undersigned.

Respectfully submitted,

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